

c1
said cancer system model based on parameters specific to the individual; and
a selector adapted to select an optimal treatment protocol from said plurality of treatment
protocols based on the modified system model.

c2
240. (Amended) The system of claim 238 where the system includes a set of control
functions that are adapted to uniquely determine an outcome of every single step, wherein said
control functions comprise age of cells, state of a current population and associated environment.

c3
244. (Amended) The system of claim 243, wherein the system is adapted to
incorporate pharmacokinetics and pharmacodynamics, cytostatic effects, cytotoxic effects, and
other effects on cell disintegration of anticancer drugs.

c4
246. (Twice Amended) The system of claim 234 wherein, said parameters specific to
the individual comprise parameters related to tumor dynamics, patient specific drug
pharmacokinetics, pharmacodynamics and dynamics of dose-limiting host tissues.

c5
466. (Amended) A computer-implemented method for recommending an optimal
treatment protocol for treating cancer using drugs for an individual, said method comprising:
creating a cancer system model;
enumerating a plurality of treatment protocols for treating cancer using drugs;
modifying the system model based on parameters specific to the individual;
selecting an optimal treatment protocol from said plurality of treatment protocols based

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on the modified system model; and

recommending said optimal treatment.

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472. (Amended) The method of claim 470 where a set of control functions uniquely determine an outcome of every single step, wherein said control functions comprise age of cells, state of a current population and associated environment.

C7
476. (Amended) The method of claim 475, wherein pharmacokinetics, pharmacodynamics, cytotoxic effects, cytostatic effects and other effects on cell disintegration of anticancer drugs are incorporated into the model.

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478. (Amended) The method of claim 466 wherein, said parameters specific to the individual comprise parameters related to tumor dynamics, patient specific drug pharmacokinetics, pharmacodynamics and dynamics of dose-limiting host tissues.
